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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,870	11/13/2003	Barry Ross Allen	48-0018	6297

7590 01/21/2005
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EXAMINER

HAM, SEUNGSOOK

ART UNIT PAPER NUMBER

2817

DATE MAILED: 01/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/705,870

Applicant(s)

ALLEN ET AL.

Examiner

Seungsook Ham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-15 is/are allowed.
- 6) ☒ Claim(s) 1 and 4-9 is/are rejected.
- 7) ☒ Claim(s) 2 and 3 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claims 2-4 and 10-15 objected to because of the following informalities:

In claim 2, line 7, and claim 10, line 13, "ground" should be corrected to – grounded—for consistency of terminology; and

Claim 2, lines 8 and 13, and claim 10, line 14, 19, after "each of said," -- grounded—should be inserted for clarity.

In claim 4, last line, "bottom said" should be corrected to –bottom side--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 and 4-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Kane et al. (US '532).

Kane et al. (figs. 3-7b, 12a-12c, 18-20) discloses a suspended substrate coupler 31 comprising: a housing 32 (see fig. 19); a dielectric substrate 36 suspended in the

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housing, the substrate having a topside and a bottom side; a first transmission line (fig. 12a, element 66 and claim 1) disposed on the topside of the substrate; a second transmission line disposed on the bottom side of the substrate (see claim 1 and fig. 11, the coupling sections 66 are disposed on the opposite sides of the dielectric substrate 36); and means for capacitively coupling (fig. 12, protrusions 72) the first and second transmission lines to improve mode velocity matching in said coupling (col. 8, line 35 – col. 9, line 37).

Regarding claims 4, Kane et al. (fig. 19) shows the dielectric substrate mounted on a ledge in the substrate; a first cavity is formed between the topside of the substrate and cover 32, and a second cavity 88 is formed between the bottom side of the substrate and the floor of the housing.

Regarding claims 5-9, Kane et al. (see figs. 5, 11 and 12a-12c) discloses an input port and output port connected to the first transmission line through first and second microstrip interfaces, respectively (see fig. 12a, the both ends of the coupling section 66 are coupled to input and output ports, see fig. 11), and also match stubs are provided at first and second microstrip interfaces (the curved end portion at the end of coupling section 66). Moreover, an isolation port and a coupled output port connected to the second transmission (see fig. 5) through third and fourth microstrip interfaces; and first second conductive vias 74 (see fig. 12b) that connected the top side and the bottom side of the substrate.

Allowable Subject Matter

Claims 2 and 3 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 10-15 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: The specific structure of means for capacitively coupling the first and second transmission lines recited in claim 2 is not shown nor suggested by any prior art. Claim 10, lines 7-22 also recites the same limitation as in claim 2.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kenyon et al. (US 4,394,603) discloses a coupler having capacitive pads for improving odd and even mode phase velocity differences;

D'Oro et al. (US 305) discloses a coupler with capacitive pads; and


Morse (US '646) discloses a suspended substrate coupler with matching stubs.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seungsook Ham whose telephone number is (571) 272-2405. The examiner can normally be reached on Monday-Thursday, 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571)-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Seungsook Ham
Primary Examiner
Art Unit 2817

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